

d.) Remarks

The present invention generally comprises a system for editing text in a computer or word processor using hand drawn inputs to carry out formatting tasks such as outline and heading formats, setting margins, and establishing tab settings. The invention introduces the use of a staircase object for establishing a heading/outline format for text. The staircase object must have at least one horizontal and vertical segment in alternating order to define a stepped, descending (or ascending) figure. After the user draws the staircase object and the software recognizes it as a staircase formatting object, the user then places alphanumeric characters adjacent to each step to exemplify the heading/outline format that will be applied to a text object. The placement of these characters can be by any means available to a user, e.g., typing on a keyboard, hand printing or script recognition, voice recognition and the like. The headings may be uppercase or lowercase letters, numbers, Roman numerals, or any combination of these characters, including parentheses and punctuation marks. These heading can also include objects, like circles or ellipses or squares. These headings can be any size or style and they do not have to match the font, style or size of the text to which they are added to become headings. The heading characters become bound (agglomerated) to the staircase object.

The staircase formatting object is applied to any pre-existing text by drawing an arrow from the staircase formatting object to the text, or by dragging the staircase formatting object to overlay at least part of the text. The width of the steps of the staircase object can determine the leftward indentation of each heading

with respect to the other headings, and the height of the riser of each step can determine the vertical spacing of the heading sections. Alternatively, the leftward indentation and the vertical spacing can be according to a default setting, where the size of the stair object's individual stair steps will not determine these factors. In either case, these parameters may be adjusted by the user clicking and dragging on the staircase segments and moving them up or down or right or left.

A significant feature is that any heading character agglomerated to a staircase formatting object may be changed by replacement, so that a different character, or graphic, or picture is displayed in place of the heading alphanumeric character. For example, as shown in Figure 14A, a bullet character 106 may be drawn or created as a text character, and a colored arrow that represents the action "replace", e.g., a blue arrow 107, is drawn from the character 106 to the "A" character that is agglomerated to the staircase formatting object 104. Likewise, a happy face figure 108 may be created and substituted for heading character "1." Thereafter, when the staircase object 104 is applied to a text object, such as the text object of Figure 5B, a bullet 106 is displayed wherever an uppercase alphabet character would otherwise be displayed, and a happy face figure 108 is displayed in place of the numerical heading.

In the instant Office Action the primary reference relied upon in rejecting the claims is the Forcier patent. Forcier describes an onscreen editing scheme in which hand-written text is entered by a pen on a sensing surface. It also provides a simple editing system in which pen-based gestures are recognized by software to carry out simple editing functions on existing handwritten text inputs. The editing

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system employs simple pen gestures on the sensing surface to carry out simple editing functions on a line-by-line basis. The software distinguishes between writing strokes and editing gestures by a simple expedient: when the pen tip is held motionless on the sensing surface for a predetermined time interval, the software switches to gesture mode and accepts the next stroke as an editing command. Alternatively, a double tap at the same point, or a particular pen angle may be detected and used to initiate the edit gesture mode (see col. 13, lines 36-60).

The preferred gesture set of Forcier, described in col. 14, line 40 to col. 15, line 67. It is significant that Forcier employs simple gestures to modify the text (e.g., insert or delete line, mark BOL, mark beginning of block of text, mark end of block of text, etc.), and these gestures are applied to a particular line or point in the text block. Thus the editing process of Forcier is carried out on a line-by-line basis. There is absolutely no disclosure of a text formatting object, as in the present invention, that applies heading and outline formatting to an entire text object in one action. Nor does Forcier teach the concept of using the text formatting object to set the heading styles of the format, including uppercase or lowercase letters, numbers, Roman numerals, or any combination of these characters, including parentheses and punctuation marks. These heading can also include objects, like circles or ellipses or squares. These headings can be any size or style and they do not have to match the font, style or size of the text to which they are added to become headings. The heading characters are bound

(agglomerated) to the staircase object, and are applied in one stroke to an entire

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text object, whether one line or 100 lines or more. This concept is entirely absent in Forcier.

Moreover, in the present invention the text formatting object is a staircase object in which the width of the steps of the staircase object can determine the leftward indentation of each heading with respect to the other headings, and the height of the riser of each step can determine the vertical spacing of the heading sections. Alternatively, the leftward indentation and the vertical spacing can be according to a default setting, where the size of the stair object's individual stair steps will not determine these factors. In either case, these parameters may be adjusted by the user clicking and dragging on the staircase segments and moving them up or down or right or left. And here again, the staircase formatting object is a unified formatting object that is applied to all of a text object in one stroke, which is completely distinct from the line-by-line editing system of Forcier.

In addition, the staircase formatting object sets the outline heading style of the entire text object, and initiates the style and count of the headings, whether alphabetic, numeric, Roman numerals, or the like, and including font, font style and color, and font size. Forcier has no teaching of this feature whatsoever.

The formatting commands of a staircase formatting object may be applied to a text block by dragging the staircase object over the text block, or by drawing an arrow from the staircase object to the text block. A salient feature of the invention is that one staircase formatting object may be applied to more than one text block. As shown in Figure 13, the user may draw multiple arrows from a single staircase object 101 to different text objects 102 and 103. The heading

styles of the staircase object 101 are applied to the multiple text objects. Thus the same heading styles and appearance may be made uniform among multiple text objects. Forcier has no such capability.

The present invention is directed to a refinement of the staircase formatting object in which any heading character agglomerated to a staircase formatting object 104 may be changed by replacement, so that a different character, or graphic, or picture is displayed in place of the heading alphanumeric character. For example, a bullet character 106 may be drawn or created as a text character, and a colored arrow that represents the action “replace”, e.g., a blue arrow 107, is drawn from the character 106 to the “A” character that is agglomerated to the staircase formatting object 104. In rejecting the claims relating to this feature, the rejection cites Forcier Figures 7B and 7C and col. 28, lines 1-8. This citation is frankly baffling, since it has no bearing on the function of substituting a heading character or graphic in place of a heading alphanumeric character. Rather, it relates to opening a space in a text line by using the “insert space” gesture. Applicant asserts that this reference cannot support the rejection, which should be withdrawn.

The Nagasawa reference is cited for a showing of a canvas. In the reference, the term “canvas” refers to “a system for defining a 2D edge shape. The function of the canvas is limited narrower than drawing creation drafting CAD.” (col. 5, lines 13-15.) Thus in Nagasawa a ‘canvas’ is a delimited portion of the display used only to portray the edge configuration of a drawing object. In contrast, the present invention provides an Info Canvas, as described for example

in paragraphs 0066-0068. As shown in Figure 2 of the present application, the user may right click (or the equivalent) on the object 23 to call forth a display of an Info Canvas 26 that pertains to the object 23. The Info Canvas 26 presents, *inter alia*, a selection “Wrap to left edge” and “Wrap under heading.” When this latter selection is on (highlighted), the text following an outline heading wraps under the left edge of the heading indicia, as shown in Figure 2. This information presentation and selection function is completely absent in Nagasawa. Thus the reference provides no basis for rejecting claim 4.

The Tognazzini reference is cited for an alleged showing of selecting and deselecting objects. The reference relates to an eye tracking system for scrolling and controlling a display. It presents no teaching that relates to an Info Canvas, nor does it describe how an Info Canvas could be used to present and select variables for a staircase formatting object. The Jorna reference does not add any relevant prior art teaching, since it relates to a system for navigating a database, but does not teach any method or graphical display technique for instantly presenting an Info Canvas that provides information and selections relating to an onscreen object, such as the staircase formatting object. And the Henry reference, which relates to a text entry method for relating drawn characters to a set of recognized characters and a set of words or phrases. This teaching does not elucidate or illuminate the Info Canvas concept in any way.

Due to the manifest distinctions of the claims over the cited prior art, applicant respectfully traverses the rejections of claims 1-8. Claim 1 recites the steps of drawing a staircase object having at least one vertical segment joined to at

least one horizontal segment to define at least one step, and then recognizing the drawn staircase object. Forcier does not ever mention either drawing or recognizing a staircase object. Claim 1 also recites the step of defining a heading style by entering at least one alphanumeric character adjacent to the at least one step, thereby creating a staircase formatting object. Forcier never suggests any means of establishing a heading style, and certainly does not mention the step of entering an alphanumeric character for that purpose. Furthermore, claim 1 recites the step of substituting a graphic object for the at least one alphanumeric character; thereafter automatically creating a heading having said graphic object wherever the alphanumeric character appears at the beginning of a line in the text. Once again, Forcier is completely devoid of any teaching of substituting a graphic object to comprise a heading at the beginning of a line of text. Thus it is clear that claim 1 as originally submitted is patentable over Forcier, and should be allowed.

Claim 2 recites the step of drawing an arrow from the graphic object to the alphanumeric character of the staircase formatting object to carry out the substitution step. There is no teaching in Forcier of using an arrow to carry out a substitution function, and claim 2 should also be allowed.

Claim 3 depends from claim 1, and further specifies that the graphic object that is substituted is a bullet. Applicant cannot find any mention in Forcier of a bullet used in a formatting task, and it is believed that claim 3 is also allowable over the art.

Claims 4-7 depend from claim 1 and further recite details of the use of the

Info Canvas to set and control the display of the graphic object in the heading. As

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noted above, the Nagasawa patent's disclosure of a 'canvas' bears no similarity to the Info Canvas of the invention, and it is asserted that claims 4-7 are clearly allowable over the cited combination of references.

Claim 8 depends from claim 1, and introduces the step of assigning the placement of the graphic object in the heading to a designated keyboard function key, whereby pressing the designated keyboard function key at the beginning of a line in the text causes the graphic object to appear in the heading. This function is lacking in Forcier, and cannot be constructed from any combination of the cited references. Thus claim 8 should also be allowed.

No other patentability issues remain to be resolved, and this application in condition for issuance. Action toward that end is earnestly solicited.

Respectfully Submitted,



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